CLAIMS:

1. A compound 8 to 80 nucleobases in length targeted to at least a portion of a nucleic acid molecule encoding apolipoprotein(a), wherein said compound is at least 70% complementary to said portion of said nucleic acid molecule encoding apolipoprotein(a), and wherein said compound inhibits the expression of apolipoprotein(a) mRNA, said compounds selected from the group consisting of SEQ ID Nos: 85-96.

2. The compound of claim 1 comprising an oligonucleotide.

3. The compound of claim 2 comprising an antisense oligonucleotide.

4. The compound of claim 2 comprising a DNA oligonucleotide.

5. The compound of claim 2 comprising an RNA oligonucleotide.

6. The compound of claim 2 comprising a chimeric oligonucleotide.

7. The compound of claim 2 wherein at least a portion of said compound hybridizes with RNA to form an oligonucleotide-RNA duplex.

8. The compound of claim 1 having at least one modified internucleoside linkage, sugar moiety, or nucleobase.

9. The compound of claim 1 having at least one 2'-O-methoxyethyl sugar moiety.

10. The compound of claim 1 having at least one phosphorothioate internucleoside linkage.

11. The compound of claim 1 having at least one 5-methylcytosine.

12. The compound of claim 1, wherein said compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a 5'-untranslated region of the a nucleic acid molecule encoding apolipoprotein(a) (SEQ ID NO: 4).

13. The compound of claim 1, wherein said compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a start region of the a nucleic acid molecule encoding apolipoprotein(a) (SEQ ID NO: 4).

14. The compound of claim 1, wherein said compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a coding region of the a nucleic acid molecule encoding apolipoprotein(a) (SEQ ID NO: 4).

15. The compound of claim 1, wherein said compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a stop region of the a nucleic acid molecule encoding apolipoprotein(a) (SEQ ID NO: 4).

16. The compound of claim 1, wherein said compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a 3'-untranslated region of the a nucleic acid molecule encoding apolipoprotein(a) (SEQ ID NO: 4).

17. The antisense compound of claim 1 which is single-stranded.

18. A compound 8 to 80 nucleobases in length targeted to a nucleic acid molecule encoding apolipoprotein(a), wherein said compound is at least 70% complementary to said nucleic acid molecule encoding apolipoprotein(a), and wherein said compound selectively inhibits the expression of apolipoprotein(a) mRNA without inhibiting expression of a second gene selected from the group consisting of plasminogen mRNA and apolipoprotein (b) mRNA.

19. The compound of claim 18, wherein said compound comprises a sequence selected from the group consisting of SEQ ID NOs 11, 23, 28, 30, 31, 33, 34, 35, 36, 39, 42, 43 and 45.

20. The compound of claim 18 comprising a chimeric oligonucleotide.

21. The compound of claim 18 wherein at least a portion of said compound hybridizes with RNA to form an oligonucleotide-RNA duplex.

22. The compound of claim 18 having at least one modified internucleoside linkage, sugar moiety, or nucleobase.

23. The compound of claim 18 having at least one 2'-O-methoxyethyl sugar moiety.

24. The compound of claim 18 having at least one phosphorothioate internucleoside linkage.

25. The compound of claim 18 having at least one 5-methylcytosine.

26. A method of inhibiting the expression of apolipoprotein(a) in a cell or tissue comprising contacting said cell or tissue with a compound of claim 1 or 18, so that expression of apolipoprotein(a) is inhibited

27. The method of claim 26 wherein the modulator of apolipoprotein(a) expression comprises an oligonucleotide, an antisense oligonucleotide, a DNA oligonucleotide, an RNA oligonucleotide, an RNA oligonucleotide having at least a portion of said RNA oligonucleotide capable of hybridizing with RNA to form an oligonucleotide-RNA duplex, or a chimeric oligonucleotide.

28. The method of claim 26, wherein said compound comprises a sequence selected from the group consisting of SEQ ID NOs 11, 23, 28, 30, 31, 33, 34, 35, 36, 39, 42, 43 and 45.

29. A method of screening for a modulator of apolipoprotein(a), the method comprising the steps of:

contacting a preferred target segment of a nucleic acid molecule encoding apolipoprotein(a) with one or more candidate modulators of apolipoprotein(a),

contacting a preferred target segment of a nucleic acid molecule encoding plasminogen with one or more of said candidate modulators of apolipoprotein(a); and

identifying one or more modulators of apolipoprotein(a) expression which selectively inhibits the expression of apolipoprotein(a) without inhibiting expression of plasminogen.

30. A diagnostic method for identifying a disease state comprising identifying the presence of apolipoprotein(a) in a sample using at least one of the primers comprising SEQ ID NOs 56 or 67, or the probe comprising SEQ ID NO: 78.

31. A kit or assay device comprising the compound of claim 1 or claim 18.

32. A method of treating an animal having a disease or condition associated with apolipoprotein(a) comprising administering to said animal a therapeutically or

prophylactically effective amount of the compound of claim 1 or 18 so that expression of apolipoprotein(a) is inhibited.

33. The method of claim 32, wherein the disease or condition is a cardiovascular disorder, atherosclerosis, hypercholesterolimia, coronary artery disease or any combination thereof.

34. A method of inhibiting the expression of apolipoprotein(a) comprising contacting a biological system expressing human apolipoprotein(a) with a synthetic antisense compound, wherein said synthetic antisense compound comprises from 15 to 30 nucleobases in length and has at least 3 mismatches to a target sequence, said target sequence being at least a portion of a sequence encoding human plasminogen.

35. The method of claim 34 wherein the biological system is a human.

36. The method of claim 35 wherein the biological system is a transgenic animal.

37. A chemically modified oligomeric compound 8 to 80 nucleobases in length having a 5′ and a 3′ terminus, targeted to a nucleic acid molecule encoding apolipoprotein(a), wherein said compound is at least 70% complementary to at least an 8 nucleobase portion of said nucleic acid molecule encoding apolipoprotein(a), and wherein said compound inhibits the expression of apolipoprotein(a) mRNA, said compound having a

stabilizing group attached to at least one of said termini.

38. A chimeric oligonucleotide of 8 to 80 nucleobases in length having a 5′ and a 3′ terminus, targeted to a nucleic acid molecule encoding apolipoprotein(a), and complementary to at least an 8 nucleobase portion of said molecule, wherein said oligonucleotide inhibits the expression of apolipoprotein(a) mRNA, and wherein said oligonucleotide comprises a first sequence located at one said terminus and a second sequence located at the opposing terminus, said first and second sequences are chemically distinct.

39. The chimeric oligonucleotide of claim 38 wherein at least one of said first or second sequences is chemically modified.

40. The chimeric oligonucleotide according to claim 39, wherein said chemical modification is 2′-MOE nucleotides or 2′-deoxynucleotides.

41. Use of a compound of claim 1 or claim 18 in the preparation of a medicament for the treatment of a cardiovascular disease.

42. Use of claim 41 wherein said disease is selected from the group consisting of atherosclerosis, hypercholesterolemia, coronary artery disease, myocardial infarction, post-surgical cardiovascular complications and any combination thereof.

43. A method of reducing plasma levels of apolipoprotein(a) in a subject with an acute phase responses following a cardiovascular injury comprising administering to said animal a therapeutically or prophylactically effective amount of a compound 8 to 80 nucleobases in length targeted to a nucleic acid molecule encoding apolipoprotein(a), wherein said compound is at least 70% complementary to said nucleic acid molecule encoding apolipoprotein(a), and wherein said compound inhibits the expression of apolipoprotein(a) mRNA, so that expression of apolipoprotein(a) is inhibited.

44. The method of claim 43, wherein said compound selectively inhibits the expression of apolipoprotein(a) mRNA without inhibiting expression of a second gene selected from the group consisting of plasminogen mRNA and apolipoprotein (b), so that only expression of apolipoprotein(a) is inhibited.

45. The method according to claim 43, wherein said injury is surgery.

46. The method according to claim 43, wherein said injury is a myocardial infarction.

47. A method of reducing apolipoprotein(a) levels in cytokine-induced cells comprising contacting said cells with a compound 8 to 80 nucleobases in length targeted to a nucleic acid molecule encoding apolipoprotein(a), wherein said compound is at least 70% complementary to said nucleic acid molecule encoding

apolipoprotein(a), and wherein said compound inhibits the expression of apolipoprotein(a) mRNA, so that expression of apolipoprotein(a) is inhibited.

48. The method of claim 47, wherein said compound selectively inhibits the expression of apolipoprotein(a) mRNA without inhibiting expression of a second gene selected from the group consisting of plasminogen mRNA and apolipoprotein (b), so that only expression of apolipoprotein(a) is inhibited.

49. The method of claim 47 wherein said contacting occurs *in vivo* or *in vitro*.